

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below), or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Recombinant Bacterial Vaccine System with Environmentally Limited Viability

the specification of which (check one)

_____ is attached hereto

_____ was filed on _____
as application Serial No. _____

_____ and was amended on: _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)	Priority Claimed
<div style="display: flex; justify-content: space-between;"> <div>_____ (Number)</div> <div>_____ (Country)</div> <div>_____ (Day/Month/Year Filed)</div> </div>	_____
<div style="display: flex; justify-content: space-between;"> <div>_____ (Number)</div> <div>_____ (Country)</div> <div>_____ (Day/Month/Year Filed)</div> </div>	_____
<div style="display: flex; justify-content: space-between;"> <div>_____ (Number)</div> <div>_____ (Country)</div> <div>_____ (Day/Month/Year Filed)</div> </div>	_____

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of the application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)

(Filing Date)

Status
(patented, pending, abandoned)

00110-01602160

"Recombinant Bacterial Vaccine System with Environmentally Limited Viability"
By: Roy Curtiss, III and Steven A. Tinge
Filed: June 7, 1995
DECLARATION

Express Mail Label Number TB046533641US

(Application Serial No.)

(Filing Date)

Status
(patented, pending, abandoned)

As named inventor, I hereby appoint the following attorney(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Patrea L. Pabst	31,284
Madeline I. Johnston	36,174
Robert A. Millman	36,217

Send Correspondence to: Patrea L. Pabst, Esq.
ARNALL GOLDEN & GREGORY
2800 One Atlantic Center
1201 W. Peachtree Street
Atlanta, GA 30309-3450

Direct telephone calls to: Patrea L. Pabst (404)873-8794

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Roy Curtiss, III

Inventor's signature _____ Date _____

Residence 6065 Lindell Blvd, St. Louis, MO. 63112-1009

Citizenship United States

Post Office Address _____

Full name of second joint inventor (if any) Steven A. Tinge

Inventor's signature _____ Date _____

Residence 52 Lindenleaf Lane, Belleville, IL 62223

Citizenship United States

Post Office Address _____

JUL 03 1995

Applicant or Patentee: Roy Curtiss, III, and Steven A.
Tinge

Attorney's
Docket No.:
MEGAN100

Serial or Patent No.: 08/473,789

Filed or Issued: June 7, 1995

For: RECOMBINANT BACTERIAL VACCINE SYSTEM
WITH ENVIRONMENTALLY LIMITED VIABILITY

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(c)) - SMALL BUSINESS CONCERN

I hereby declare that I am

[] the owner of the small business concern identified
below:

[X] an official of the small business concern empowered to
act on behalf of the concern identified below:

Megan Animal Health, Inc.
3655 Vista Avenue
St. Louis, Missouri 63110

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled "Recombinant Bacterial Vaccine System with Environmentally Limited Viability" by Roy Curtiss, III, and Steven A. Tinge described in

[] the specification filed herewith

[X] application serial no. 08/473,789 , filed June 7, 1995

[] patent no. , issued

"Recombinant Bacterial Vaccine System
with Environmentally Limited Viability"
By: Roy Curtiss, III, and Steven A. Tinge
Filed: June 7, 1995
VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor concern under 37 CFR 1.9(c) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). *NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

NAME Washington University
ADDRESS One Brookings Drive, St. Louis, Missouri 63130
☐ INDIVIDUAL ☐ SMALL BUSINESS ☒ NONPROFIT

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: Steven A. Tinge

TITLE OF PERSON OTHER THAN OWNER Assistant Professor

ADDRESS OF PERSON SIGNING Washington University

Steven A. Tinge
SIGNATURE

June 7, 1995
DATE

Applicant or Patentee: Roy Curtiss, III, and Steven A.
Tinge

Attorney's
Docket No.:
MEGAN100

Serial or Patent No.: 08/473,789

Filed or Issued: June 7, 1995

For: RECOMBINANT BACTERIAL VACCINE SYSTEM
WITH ENVIRONMENTALLY LIMITED VIABILITY

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(d)) - NONPROFIT ORGANIZATION

I hereby declare that I am an official empowered to act on
behalf of the nonprofit organization identified below:

NAME OF ORGANIZATION: Washington University

ADDRESS OF ORGANIZATION: One Brookings Drive
St. Louis, Missouri 63130

TYPE OF ORGANIZATION

- ☒ UNIVERSITY OR OTHER INSTITUTION OF HIGHER EDUCATION
- ☐ TAX EXEMPT UNDER INTERNAL REVENUE SERVICE CODE
(26 USC 501(a) and 501(c)(3))
- ☐ NONPROFIT SCIENTIFIC OR EDUCATIONAL UNDER STATUTE
OF STATE OF THE UNITED STATES OF AMERICA
- ☐ WOULD QUALIFY AS TAX EXEMPT UNDER INTERNAL REVENUE
SERVICE CODE (26 USC 501(a) and 501(c)(3) IF LOCATED
IN THE UNITED STATES OF AMERICA
- ☐ WOULD QUALIFY AS NONPROFIT SCIENTIFIC OR EDUCATIONAL
UNDER STATUTE OF STATE OF THE UNITED STATES OF AMERICA
IF LOCATED IN THE UNITED STATES OF AMERICA

I hereby declare that the nonprofit organization identified
above qualifies as a nonprofit organization as defined in 37 CFR
1.9(e) for purposes of paying reduced fees under section 41(a)
and (b) of Title 35, United States Code with regard to the
invention entitled "Recombinant Bacterial Vaccine System with

MEGAN100

"Recombinant Bacterial Vaccine System
with Environmentally Limited Viability"
By: Roy Curtiss, III, and Steven A. Tinge
Filed: June 7, 1995
VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS

Environmentally Limited Viability" by Roy Curtiss, III, and
Steven A. Tinge described in

- ☐ the specification filed herewith
☒ application serial no. 08/473,789 , filed June 7, 1995
☐ patent no. _____ issued _____

I hereby declare that rights under contract or law have been
conveyed to and remain with the nonprofit organization with
regard to the above-identified invention.

If the rights held by the nonprofit organization are not
exclusive, each individual, concern or organization having rights
to the invention is listed below* and no rights to the invention
are held by any person, other than the inventor, who could not
qualify as an independent inventor under 37 CFR 1.9(c) or by any
concern which would not qualify as a small business concern under
37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

*NOTE: Separate verified statements are required from each named
person, concern or organization having rights to the invention
averring to their status as small entities. (37 CFR 1.27)

NAME: Megan Animal Health, Inc.

ADDRESS: 3655 Vista Avenue, St. Louis, Missouri 63110

☐ INDIVIDUAL ☒ SMALL BUSINESS CONCERN ☐ NONPROFIT ORG.

I acknowledge the duty to file, in this application or
patent, notification of any change in status resulting in loss of

SECRET

entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

NAME OF PERSON SIGNING: H.S. Leahey

TITLE IN ORGANIZATION: Director, Technology Management

ADDRESS OF PERSON SIGNING: One Brookings Drive, Campus Box 1045
St. Louis, Missouri 63130

DATE _____

8/1/95

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below), or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Recombinant Bacterial Vaccine System with Environmentally Limited Viability

the specification of which (check one)

_____ is attached hereto

 x was filed on June 7, 1995
as application Serial No. 08/473,789

_____ and was amended on: _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

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I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)	Priority Claimed
_____ (Number)	_____ (Country)
_____ (Number)	_____ (Country)
_____ (Number)	_____ (Country)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of the application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	Status (patented, pending, abandoned)
--------------------------	---------------	--

"Recombinant Bacterial Vaccine System with Environmentally Limited Viability"

By: Roy Curtiss, III and Steven A. Tinge

Filed: June 7, 1995

DECLARATION

As named inventor, I hereby appoint the following attorney(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Patrea L. Pabst	31,284
Madeline I. Johnston	36,174
Robert A. Millman	36,217

Send Correspondence to: Patrea L. Pabst, Esq.
ARNALL GOLDEN & GREGORY
2800 One Atlantic Center
1201 W. Peachtree Street
Atlanta, GA 30309-3450

Direct telephone calls to: Patrea L. Pabst (404)873-8794

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Roy Curtiss, III
Inventor's signature *Roy Curtiss, III* Date 7-6-95
Residence 6065 Lindell Blvd, St. Louis, MO 63112-1009
Citizenship United States
Post Office Address _____

Full name of second joint inventor (if any) Steven A. Tinge
Inventor's signature *Steven A. Tinge* Date 7-10-95
Residence 52 Lindenleaf Lane, Belleville, IL 62223
Citizenship United States
Post Office Address _____

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Roy Curtiss, III and Steve A. Tinge

Serial No.: Continuation of **Group Art Unit:**
08/473,789

Filed: June 7, 1995 **Examiner:**

For: RECOMBINANT BACTERIAL VACCINE SYSTEM WITH ENVIRONMENTALLY LIMITED VIABILITY

Assistant Commissioner for Patents
Washington, D.C. 20231

ASSOCIATE POWER OF ATTORNEY UNDER 37 C.F.R. § 1.34

Sir:

Please recognize as Associate Patent Attorneys and Patent Agent in this case:

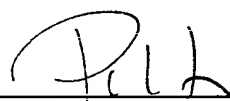
Robert A. Hodges	Reg. No. 41,074
Collen A. Beard	Reg. No. 38,824
Kevin W. King	Reg. No. P-42,737

Please continue to direct all communication to Patrea Pabst at the following address:

Patrea L. Pabst
ARNALL GOLDEN & GREGORY, LLP
2800 One Atlantic Center
1201 West Peachtree Street
Atlanta, Georgia 30309-3450
(404) 873-8794; 873-8795 (fax)

Date: July 22, 1998

ARNALL GOLDEN & GREGORY, LLP
2800 One Atlantic Center
1201 West Peachtree Street
Atlanta, Georgia 30309-3450
(404) 873-8794
(404) 873-8595 (fax)



Patrea L. Pabst, Reg. No. 31,284

852240-04502150



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JANUARY 01, 1996

PTAS

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231



100058695A

PATREA L. PABST, ESQ.
ARNALL GOLDEN & GREGORY
1201 WEST PEACHTREE STREET
2800 ONE ATLANTIC CENTER
ATLANTA, GA 30309

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/10/1995

REEL/FRAME: 7600/0008
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
CURTISS, ROY III

DOC DATE: 07/07/1995

ASSIGNOR:
TINGE, STEVEN A.

DOC DATE: 07/10/1995

ASSIGNEE:
WASHINGTON UNIVERSITY
ONE BROOKINGS DRIVE
ST. LOUIS, MISSOURI 63130

SERIAL NUMBER: 08473789
PATENT NUMBER:

FILING DATE: 06/07/1995
ISSUE DATE:

STEVEN POST, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

DOCKETED
DATE: 1/23/96
BY: DTX

JAN 22 1996

#3

#000000-581-ATL

09-08-1995

RECO

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U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

100058695

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Roy Curtiss, III
Steven A. TingeAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: July 7, 10, 1995

2. Name and address of receiving party(ies)

Name: Washington University

Internal Address:

Street Address: One Brookings Drive

City: St. Louis State: MO ZIP: 63130

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

08/473,789

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Patrea L. Pabst, Esq.

Internal Address: Arnall Golden & Gregory

Street Address: 1201 West Peachtree Street

2800 One Atlantic Center

City: Atlanta State: GA ZIP: 30309

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41).....\$ 40.00

☒ Enclosed☒ Authorized to be charged to deposit account
additional fee or credit overpayment

8. Deposit account number:

01-2507

(Attach duplicate copy of this page if paying by deposit account)

020 TT 08/18/95 08473789

DO NOT USE THIS SPACE

1 581

40.00 CK

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Patrea L. Pabst, Esq.

Name of Person Signing

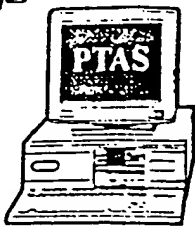
Signature

August 7, 1995

Date

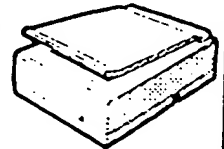
Total number of pages including cover sheet, attachments, and document: 4

Mail documents to be recorded with required cover sheet information to:



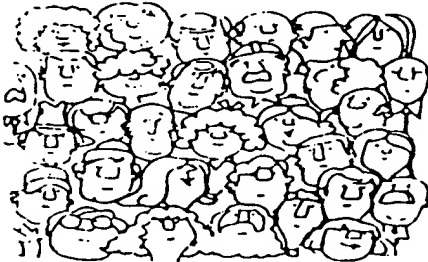
ASSIGNMENT NEWS

(Office of Public Records, Assignment Division)



Vol 1.1

Pardon Us



We regret the recent delays in processing and returning your documents. Our new image-based assignment processing system (PTAS) is now fully operational, and all employees have been trained on the new system. The Assignment Division is working diligently to meet our goals of recording documents within 20 days and returning them to you in 34 days or less.

Helpful Hint

Please do not send duplicate copies of cover sheets or conveyance documents when submitting documents for recordation. Once the cover sheets and documents are scanned into PTAS, examination is performed using computer generated images. The office saves considerable processing time and system disk space if duplicate copies are not scanned into PTAS.



What's New in PTAS

PTAS automatically generates a preformatted notice to the PTO Office of Finance along with a system generated copy of the cover sheet. The "Notice to Finance" requests that

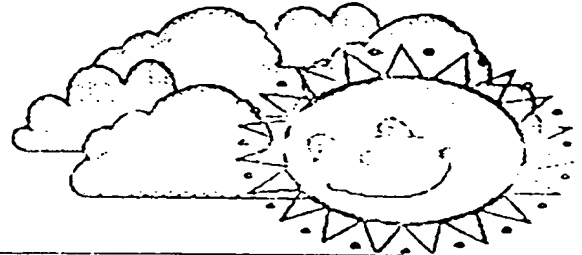
additional fees be charged to your deposit account (if authorization was provided). A copy of the



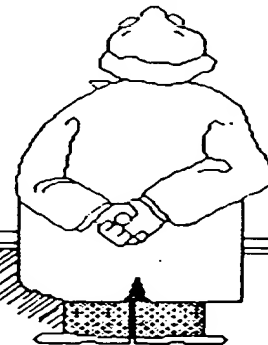
"Notice to Finance" will be mailed to you along with the Notice

of Recordation.

Therefore, duplicate copies of cover sheets are no longer required when paying by deposit account or authorizing additional fees to be charged to deposit account.



If you have any questions, you may contact our office at (703) 308-9723 from 8:30 a.m. to 5:00 p.m. EST. Telefax inquiries may be sent to (703) 308-7031.



ASSIGNMENT

We, Roy Curtiss, III, of 6065 Lindell Blvd., St. Louis, Missouri 63112-1009 and Steven A. Tinge of 52 Lindenleaf Lane, Belleville, Illinois 62223, in consideration of Ten Dollars and other valuable consideration paid to us by Washington, University, a corporation of Missouri having its principal place of business at One Brookings Drive, St. Louis, Missouri 63130, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said Washington University, its successors and assigns, the entire interest for the United States of America and its territories and all foreign countries and jurisdictions, including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in "Recombinant Bacterial Vaccine System with Environmentally Limited Viability" described in U.S. Serial No. 08/473,789 filed on June 7, 1995, by Roy Curtiss, III, and Steven A. Tinge, in the United States Patent and Trademark Office, and in all Letters Patent of the United States and its territories and all foreign countries and jurisdictions which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuation, continuation-in-part, renewals, reissue or other applications based in whole or in part thereon. And we agree, for ourselves and our executors and administrators, with said corporation and its successors and assigns but at its or their expense or charges, hereafter to execute all applications, amended specifications, deeds or other instruments, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

"Recombinant Bacterial Vaccine System with
Environmentally Limited Viability"

Filed: June 7, 1995

By: Roy Curtiss, III, and Steven A. Tinge
ASSIGNMENT

And we do hereby authorize and request the Commissioner of
Patents and Trademarks of the United States to issue such Letters
Patent as shall be granted upon said application or applications
based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this 7th day of July,
1995.



Roy Curtiss, III

State of Missouri)
County of) ss
DARLEEN PHILLIPS
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Jan. 6, 1998

Then personally appeared the above named Roy Curtiss, III
and acknowledged the foregoing instrument to be his free act and
deed, before me, this 7th day of July, 1995.



Notary Public

"Recombinant Bacterial Vaccine System with
Environmentally Limited Viability"

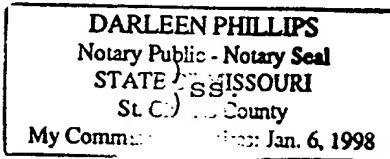
Filed: June 7, 1995

By: Roy Curtiss, III, and Steven A. Tinge
ASSIGNMENT

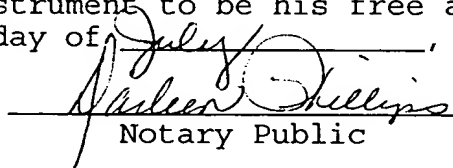
WITNESS my hand and seal this 10th day of July,
1995.


Steven A. Tinge

State of Missouri
County of



Then personally appeared the above named Steven Tinge and
acknowledged the foregoing instrument to be his free act and
deed, before me, this 10th day of July, 1995.


Notary Public